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Claims

1. A packet transmission method for transmitting data packets via a telecommunication network, comprising the steps of:

a) judging the quality of a received data packet;
b) tagging said data packet by adding a dropping information in response to the result of said judging step;
and

c) dropping said tagged data packet based on said added dropping information, when a predetermined dropping condition is met.

2. A method according to claim 1, wherein said dropping information is a drop flag provided in a header portion of said data packet.

3. A method according to claim 1 or 2, wherein said quality judgment is performed on the basis of an error check of said data packet.

4. A method according to claim 3, wherein said error check is performed based on a cyclic redundancy code included in said received data packet.

5. A method according to any one of the preceding claims, wherein said quality judgment is performed on the basis of a comparison of a quality likelihood parameter with a predetermined threshold.

6. A method according to claim 5, wherein said predetermined threshold is periodically updated for each transmission link of said telecommunication network.

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7. A method according to any one of the preceding claims,
wherein said dropping step is executed at a network element
where traffic policing and/or congestion control is
5 implemented.

8. A method according to any one of the preceding claims,
wherein said predetermined dropping condition is a
congestion of a transmission link.

9. A method according to any one of the preceding claims,
wherein said predetermined dropping condition is an overuse
of a contract of a particular connection.

10. A method according to any one of the preceding claims,
wherein said packet transmission method is an ATM
transmission method, and wherein said data packet is an ATM
cell.

11. A method according to claim 10, wherein defective data
frames are packed into the same ATM cell, wherein those ATM
cells which contain only defective frames are tagged in
said tagging step.

12. A method according to claim 10 or 11, wherein said
telecommunication network is a mobile communication
network, and wherein said transmission method is used for
transmitting ATM cells between a base station and a radio
network controller.

13. A method according to any one of the preceding claims,
wherein said data packet comprises a macro diversity
combining bit stream.

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14. A method according to claim 1 or 2, wherein said telecommunication network is a mobile communication network, said data packet is a downlink data packet, and
5 said quality is judged on the basis of an uplink quality parameter and/or a downlink power control status.

15. A method according to claim 14, wherein said downlink power control status is determined on the basis of a
10 downlink power level commanded by a mobile station to which said data packet is to be transmitted.

16. A method according to claim 15, wherein said transmission link is a macro diversity branch.

17. A transmission apparatus for transmitting data packets via a telecommunication network, comprising:
a) judging means (12, 23) for judging the quality of a received data packet; and
20 b) tagging means (13, 22) for adding a dropping information to said data packet in response to a judging result of said judging means (12, 23).

18. An apparatus according to claim 17, wherein said packet
25 transmission apparatus comprises a dropping means (14, 15, 21, 24) for detecting said dropping information and for dropping said data packet based on said detected dropping information, when a predetermined dropping condition is met.

19. An apparatus according to claim 17 or 18, wherein said tagging means (13, 22) is arranged to set a drop flag provided in a header portion of said data packet.

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20. An apparatus according to any one of claims 17 to 19, wherein said packet transmission apparatus is arranged to perform an uplink transmission, and wherein said judging means (12, 23) is arranged to judge the quality of said received data packet based on an error check of said received data packet.

21. An apparatus according to claim 20, wherein said judging means (12, 23) is arranged to perform said error check based on a cyclic redundancy code included in said received data packet.

22. An apparatus according to any one of claims 17 to 21, wherein said judging means (12) is arranged to judge the quality on the basis of a comparison of quality likelihood parameter with a stored predetermined threshold.

23. An apparatus according to claim 22, wherein said stored predetermined threshold is periodically received and updated by said judging means (12).

24. An apparatus according to claim 18, wherein said dropping means is a means implemented for traffic policing and/or congestion control.

25. An apparatus according to claims 18 or 24, wherein said dropping means (14, 15, 21, 24) comprises a drop control means (15, 24) for determining a congestion of a transmission link or an overuse of a contract of a transmission link, as said predetermined dropping condition, and for releasing a dropping operation, when the predetermined dropping condition has been determined.

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26. An apparatus according to any one of claims 17 to 25,
wherein said telecommunication network is a mobile network
and said packet transmission apparatus is a base station
5 (BS1, BS2, BS3) of said mobile network, and wherein said
data packet is an ATM cell.

27. An apparatus according to any one of claims 17 to 19,
wherein said packet transmission apparatus is arranged to
10 perform a downlink transmission, and wherein said judging
means (23) is arranged to judge the quality of said
received data packet based on an uplink quality parameter
and/or a downlink power control status.

28. An apparatus according to claim 27, wherein said
15 telecommunication network is a mobile network and said
packet transmission apparatus is a radio network controller
(RNC) of said mobile network.

29. A network element for a telecommunication network,
20 comprising dropping means for detecting a dropping
information included in a received data packet, and for
dropping said data packet based on said detected dropping
information, when the predetermined dropping condition is
25 met.

30. A network element according to claim 29, wherein said
dropping means comprises a drop control means for
determining a congestion of a transmission link and/or an
30 overuse of a contract of said transmission link, as said
dropping condition, and for releasing a dropping operation,
when the dropping condition has been determined.

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31. An apparatus according to claim 29 or 30, wherein said network element is an ATM node or an ATM gateway, and wherein said received data packet is an ATM cell.